

REMARKS

I. Status of Claims

Without prejudice, the claims have been amended to clarify the subject matter of the applicants' invention. Specifically, claim 1 has been amended to clarify the orientation of the V-groove in the platform and reference surface of the first optical component. Support for this amendment can be found, for example, in the drawings and related text. Additionally, claim 1 and 16 have been amended to indicate that the first optical component is supported solely by its side walls contacting the walls of the V-groove. Again, this is disclosed in the drawings. The subject matter of claim 2 has also been incorporated into claim 1. (Claim 2 has therefore been canceled). Claim 16 has been amended in a way similar to claim 1. Claim 16 has also been amended to indicate the step of inverting the first optical component and disposing it in the upwardly-facing V-groove. New claims 23 and 24 have been added which emphasize that the first optical component is held solely the V-groove by further stating that the first optical component is disposed in the V-groove such that a gap exists between the top surface of the platform and a downward-facing edge surface of the first component. This feature is evident in Fig. 1. The dependency of claim 7 has been changed from 1 to 6. No new matter has been added.

II. Drawings

The examiner has object to the drawings on the basis that reference nos. 4 and 12 have been both used to designate the first optical connector. The examiner also objected to the drawings for failing to disclose the second component having a substrate or the method steps.

In reply, applicants respectfully submit that the first optical component is labeled only as 4, while the fiber is labeled as 12. The specification has been amended to make clear that it is the second optical component that contains the fiber 12 shown in Fig. 1.

Applicants respectfully request that the examiner reconsider his request to depict the second component in the drawings as having a substrate. Specifically, the specification references the description of the first optical component when

mentioning this alternative embodiment (see p. 11, ll. 11-13). Applicants would like to avoid including drawings of the alternative embodiment of the second optical component since they will be the same as those of the first optical component. Finally, with respect to the request that drawings be provided that depict the process steps of claim 16, applicants respectfully request the examiner to reconsider since process steps are not usually illustrated. Nevertheless, if the examiner feels that such drawings should be provided, applicants will comply.

III. Specification

The examiner has object to the title of the invention as not being descriptive. Applicants restfully request that the examiner reconsider this objection. The title “True Position Bench” incorporates the features of the “True Position” tolerance method used in drawings in combination with the common use of an optical “Bench” as a platform to assemble components into aligned configurations/assemblies.

IV. Matters of Formality

The examiner rejected claims 7-10 and 20 under 35 U.S.C. 112 as being indefinite. Specifically, the examiner states that, in claim 7, the terms “said laser diode and “monitor diode” lack proper antecedent basis. In reply, applicants have changed the dependency of claim 7 from 1 to 6.

The examiner also states that, in claims 8-10, the term “said substrate” lacks antecedent basis. In reply, applicants submit that the claims as currently amended render this rejection moot.

Regarding claim 20, the examiner states that “more than two parallel lines” does not make sense and lacks antecedent. In reply, applicants have amended the claim to change “parallel lines” to parallel V-grooves along with a number of other minor changes. Applicants submit that the amendment overcomes this rejection.

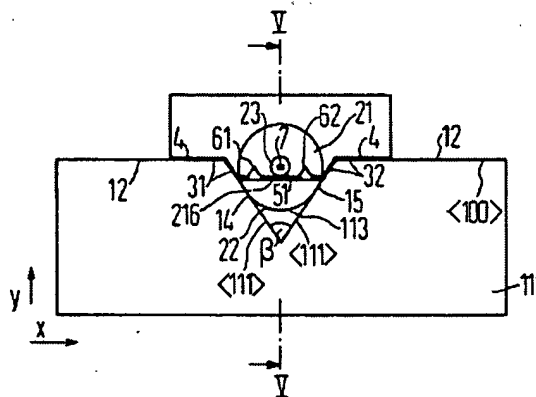
V. Prior Art Rejections

The examiner rejected the claims under 35 U.S.C. 102(b) on alternative grounds. Specifically, claims 1-4, 11 and 13-15 are rejected over Heinen et al. (US

Patent No. 4,768,199), claims 1-3, 11, 13-15 are rejected over Matsumoto (US Patent No. 5,849,204), and claims 16, 18, and 19 are rejected over Takemura (JP2001-215370).

In reply, applicants respectfully submit that the claimed invention as amended is patentably distinct over these references.

Specifically, with respect to Heinen, the claims now recite that the first optical component which is supported in the V-groove solely by the contact of the sides of the optical component against the walls of the V-groove. Heinen fails to disclose such a configuration. *To the contrary*, Heinen actually *teaches away* from this approach and advocates contacting the optical component with the top of the platform as shown below.



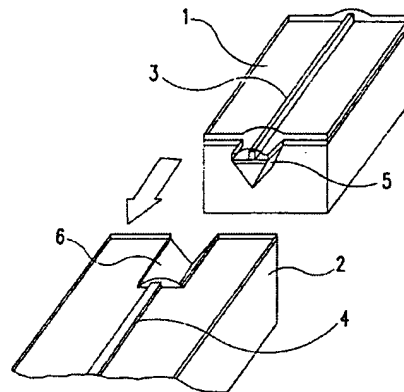
With respect to this figure, the specification states as follows:

The chip surface 4 and the surface 12 of the adjustment member 111 abut one another, *preferably tightly*.

(4:59-61 emphasis added). Therefore, Heinen makes clear that it is desirable for the top surface of the platform to contact the bottom of the optical component. The claimed invention specifically prohibits this by stating that the optical component is supported solely by the contact of its sides against the walls of the V-groove. Since the teachings of Heinen are contradictory to the configuration of the assembly of the claimed invention, not only does it fail to anticipate the claimed invention, but also there is no motivation to modify Heinen in accordance with the claimed invention.

With respect to Matsumoto, the claims now recite that the optical component has a downward-facing reference surface in the optical subassembly upon which is

mounted an optical element. No such feature is found in Matsimoto. *To the contrary*, Matsumoto discloses a substrate that is grown to be disposed with the optical element facing upward as show below:



It is inconceivable how this configuration could be altered such that the optical axis in waveguide 3 would be defined in an optical element mounted on a downward-facing reference surface. Indeed, there is no likelihood of success in modifying Matsumoto in accordance with the claimed invention. Therefore, Matsumoto fails not only to anticipate the claimed invention, but also to render it obvious.

Finally, with respect to Takemura, the figures indicate that the approach used is the same as in Matsumoto. Accordingly, like Matsumoto, this reference fails to disclose a downward-facing reference surface on which is mounted on optical element having an optical axis. To the contrary, the optical axis is on the top surface of the optical component in contrast to the claimed invention. Therefore, Takemura fails to teach or even suggest the claimed invention.